## Book Review

GILLETT, J. D. 1971. Mosquitos. (The World Naturalist Series, Ed. Richard Carrington). pp. xiii + 274 + 22 Figs + 38 plates. 468 refs. London, Weidenfeld and Nicolson. Price £5.90.

Professor Gillett has given us a readable and well-illustrated account of the life of mosquitos and their effects on human affairs. The emphasis is on their ecology and behaviour, and on the need to consider the population as well as the individual.

An introductory chapter gives an outline classification of mosquitos and notes on the history and distribution of the family. One chapter each is devoted to eggs, larvae, pupae, adults, and flight. The next three chapters, on the ovarian cycle, the circadian rhythm, and strains and species, are especially interesting as Professor Gillett has worked extensively in these fields. After two more chapters, on parasites and predators and mosquitos as nuisance, the remainder of the text, about one fifth of the book, is devoted to mosquitos and disease and mosquitos and history. The author worked for many years at the East African Virus Research Institute, Entebbe, Uganda, and was one of those responsible for elucidating the roles of *Aedes africanus* and *Aedes simpsoni* in sylvan yellow fever. The account of this work, and of other mosquito-borne viruses is well worth reading. Malaria, by contrast, is rather briefly dealt with.

The author states that he set out to draw on personal experience wherever possible, and the book is enhanced by some accounts of the practical difficulties of studying mosquitos in nature, such as building tree platforms 25 meters above the forest floor to study biting cycles in the canopy.

The drawings and photographs are well chosen and the jacket design, a painting of the Brazilian *Sabethes belisarioi* Neiva, is strikingly attractive. There are no tables of data in the text but for those looking for more detail there is a list of some 500 references. A curious feature of the book is a series of 9 appendices listing by geographical region the 2,500 or so known species, with symbols to indicate if they have been found to transmit filariae, malaria, or viruses over any part of their range. Since these appendices cover 32 pages, an extra page or two of analysis of their contents would have been helpful.

I noticed few typographical errors. The name of Dr. C. B. Cuellar is misspelled on page ix and that of Jack Colvard Jones on page 104. Male *Culiseta inornata* (Will.) do not find their females only by touch, as stated on page 104. Kliewer et al. (1966. Ann. Ent. Soc. Amer. 59: 530) have shown that the female produces a pheromone which attracts the male and releases his sexual response.

In his final chapter Professor Gillett reminds us that in spite of the great expenditure of money and effort on mosquito eradication schemes no species has actually been eradicated by man. The only complete success was the eradication of *Anopheles gambiae* from Brazil, a species introduced there only ten years previously. Only by understanding the ways of mosquitos can man learn to avoid their ravages. It is noteworthy that four of the most severe biters and transmitters of disease, *A. gambiae, Aedes aegypti, Culex pipiens fatigans,* and *Culex tarsalis* owe much of their present success to conditions that man has created for them. The case of *C. tarsalis* will be particularly hard to solve since its spread is associated with irrigation schemes, otherwise worthwhile ventures. Insecticides are hardly mentioned in this book, a refreshing change for those of us who are accustomed to seeing mosquitos as figures on mortality tables.

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